

WHAT IS CLAIMED IS:

1. A reversible multicolor recording medium comprising:
a supporting substrate; and
5 a plurality of recording layers including, respectively, a plurality of reversible thermal coloring compositions having different colors, wherein said plurality of recording layers are separated from and stacked on one another on said supporting substrate,
wherein said plurality of reversible thermal coloring compositions respectively
10 includes light-to-heat transforming materials which absorb infrared rays having different wavelength ranges to generate heat.

2. The reversible multicolor recording medium according to claim 1,
wherein
15 said plurality of recording layers are stacked on one another individually through heat insulating layers on said supporting substrate.

3. The reversible multicolor recording medium according to claim 1,
wherein a protecting layer is formed on the uppermost surface of the recording
20 medium.

4. The reversible multicolor recording medium according to claim 1,
wherein each of said recording layers contains a color-forming compound having electron donating properties and a developer having electron accepting properties, and
25 said color-forming compound and said developer undergo a reversible reaction to reversibly change the recording layer between a colored state and a decolored state.

5. A recording method using a reversible multicolor recording medium comprising a supporting substrate, and a plurality of recording layers including,
30 respectively, reversible thermal coloring compositions having different colors, wherein said plurality of recording layers are separated from and stacked on one another on said supporting substrate, and said plurality of reversible thermal coloring compositions respectively include light-to-heat transforming materials which

respectively absorb infrared rays having different wavelength ranges to generate heat, said recording method comprising:

heating said recording medium so that each of said plurality of recording layers is in a decolored state;

5 irradiating said recording medium with an infrared ray having a wavelength range corresponding to the recording layer selected from said recording layers in accordance with predetermined image information; and

recording said image information by making the recording layer generate heat and selectively coloring the recording layer.

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6. A recording method using a reversible multicolor recording medium comprising a supporting substrate, and a plurality of recording layers including, respectively, reversible thermal coloring compositions having different colors, wherein said plurality of recording layers are separated from and stacked on one another on
15 said supporting substrate, and said plurality of reversible thermal coloring compositions respectively include light-to-heat transforming materials which respectively absorb infrared rays having different wavelength ranges to generate heat,

said recording method comprising:

20 heating said recording medium so that each of said plurality of recording layers is in a colored state;

irradiating said recording medium with an infrared ray having a wavelength range corresponding to the recording layer selected from said recording layers in accordance with predetermined image information; and

25 recording said image information by making the recording layer generate heat and selectively decoloring the recording layer.

7. The reversible multicolor recording medium according to claim 2, wherein a protecting layer is formed on the uppermost surface thereof of the recording medium.

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8. The reversible multicolor recording medium according to claim 7, wherein each of said recording layers contains a color-forming compound having electron donating properties and a developer having electron accepting properties, and

said color-forming compound and said developer undergo a reversible reaction to reversibly change the recording layer between a colored state and a decolored state.

5 9. The reversible multicolor recording medium according to claim 2, wherein each of said recording layers contains a color-forming compound having electron donating properties and a developer having electron accepting properties, and said color-forming compound and said developer undergo a reversible reaction to reversibly change the recording layer between a colored state and a decolored state.

10 10. The reversible multicolor recording medium according to claim 3, wherein each of said recording layers contains a color-forming compound having electron donating properties and a developer having electron accepting properties, and said color-forming compound and said developer undergo a reversible reaction to reversibly change the recording layer between a colored state and a decolored state.

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